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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/731,344
Filing Date: December 09, 2003
Appellant(s): FLEISCHMANN ET AL.

LEOPOLD PRESSER

For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed on May 9, 2008 appealing from the Office action mailed on November 28, 2007 **(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,871,981 B2	Alexanderson et al.	3-2005
6,396,466 B1	Pross et al.	5-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 7, 9-15, 17-23 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,871,981 B2 (Alexanderson et al.) in view of US Patent No. 6,396,466 B1 (Pross et al.).

Regarding Claim 1, Alexanderson et al. discloses an aircraft cabin lighting system (Figure 1) comprising plurality of light emitting diodes (LEDs) 111 connected in series (Figure 9), and the LEDs 111 arranged at a cabin wall of aircraft cabin (Figures 1 column 2, lines 10, 11, 66 and 67; and column 3, lines 1-4). The plurality of light emitting diodes (LEDs) 402 connected in series (Figure 9) operationally coupled to a power regulator capable of pulse width modulation (Column 4, lines 1 and 2), which making the LEDs 402 actuable – capable of - to selectively represent flashing, twinkling, color changing or moving lights.

However, Alexanderson et al. does not specifically teach the LED-based lighting system operationally coupled to a control unit, a pulse width modulator and a plurality of regulating modules arranged in the manner as claimed by the applicant.

On the other hand, Pross et al. discloses an LED-based lighting system (Figure 4) comprising:

- A plurality of LEDs 9 actuable by pulse width modulation means included in the control module 5' – combination including the control 5 and the logic circuit 8 (Figures 3 and 4, column 4, lines 31-34); a control device 5' with a plurality of outputs (Figure 4, column 4, lines 35-39); and regulating modules 15 interposed between the control unit 8' and the LED lighting

units 9 (Figure 4, column 4, lines 39-45); each of the regulating modules 15 connected to respective one of the outputs of the control device 8' (Figure 4, column 4, lines 39-45); each of the regulating modules 15 having an output connected to a separate one of the lighting LED unit string 9 (Figure 4); actuation of the LED lighting units 9 being independent from each other – based in dedicated regulation modules 15 (Figure 4, column 4, lines 39-45); and each of the regulating modules 15 holding current passing through the LED string 9, and keeping the LEDs string 9 at constant current (Figure 4, column 4, lines 39-45).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to further modify the aircraft cabin lighting system of Alexanderson et al. by providing:

- The control device as taught by Pross et al. for the benefits energy saving and operational flexibility of interior illumination;
- A pulse width modulator as taught by Pross et al. for the benefits of switch-mode power supply at regulated voltage;
- Regulating modules for controlling the current as taught by Pross et al. for the benefits of substantially constant light output from the LEDs, and for longevity of operational life of the LEDs.

Regarding claims 3 and 7, 9 -11, Alexanderson et al. in view of as taught by Pross et al. discloses the aircraft cabin lighting system further comprising:

- The simultaneously actuated plurality of units 111 being connected in parallel with each other, and further connected to the output of control unit 8' (Pross et al., Figure 4);
- The plurality of LEDs 111 mounted at the cabin ceiling usable for displays (Alexanderson et al., Figure 1);
- The plurality of LEDs 111 being actuatable for selectively color-changing pattern Pross et al., Figure 1, column 1, lines 37-39);
- The arrangement of the LEDs 111 usable for displaying information on the duct panel 106 (Alexanderson et al. column 3, lines 4-7);
- The actuation of the lighting produce by the LEDs 111 with a dimmer control 906 coupled to an event seeking passenger's attention (Alexanderson et al. Figure 11, column 6, lines 53-55); and a plurality of LEDs 111 being connected in series in each of the LED strings (Alexanderson et al. Figure 9).

Regarding claims 12- 15 and 17-19, Alexanderson et al. in view of Pross et al. discloses the aircraft cabin lighting system meeting the limitations in similar manner as that applied to respective claims 1, 3 and 7-11 discussed above.

Regarding claims 20-23 and 25-27 Alexanderson et al. in view of Pross et al. discloses the aircraft cabin lighting system meeting the limitations in similar manner as that applied to respective claims 1, 3 and 7-11 discussed above.

(10) Response to Argument

1. Applicant's arguments filed on May 9, 2008 with respect to objections of claims 12-15 and 17-19; and the 35 U.S.C. 103(a) rejections of claims 1, 3, 7, 9-15, 17-23 and 25-27 have been fully considered but they are not persuasive.

Argument: Examiner's objection of the amended Claim 12 as to "must" or "can" deals with grammatical points not at all obscuring the intent and clarity of the claim language. Therefore, objections to claim 12 and its dependent claims should be withdrawn.

Response: Claim 12 (amended) line 5, "so as to selectively represent flashing Or moving light" does not clear recite whether the LEDs are required to produce the claimed lighting patterns; or the LEDs can -capable of- represent selectively flashing, twinkling, color changing or moving lights. The suggested phrase "can" reflects uncertainty of claim scope, and merely indicates capability of performing function. It does not present positive recitation of the limitation.

Argument: Neither U.S. Patent No. 6,871,981 B2 (Alexanderson et al.) nor US Patent No. 6,396,466 B1 (Pross et al.) provides for the type of the structure and function analogous to that set forth and claimed invention. Therefore, it would not be obvious to combine them.

Response: Alexanderson et al. discloses an LED lighting system for illuminating the interior of an aircraft (abstract). Pross et al. discloses an LED based illuminating vehicular display. The above teaching Alexanderson et al. as well as Pross et al. present an LED based illumination system applied to a vehicle. Therefore, provide structures and functions that are analogous to a vehicular illumination system claimed by the applicant.

Argument: Examiner's comment with regard to Pross et al. in referring to column 4, lines 39-45 are clearly erroneous. Pross et al. fails to describe independent actuation of different an LED chain or series.

Response: Pross et al. teaches the following in the above referred column 4, lines 39-45.

- a constant current in each branch is guaranteed by means of current source 15 because of parallel connection of the individual LED branch 9; The above teaching is further supported with the teaching "the first control circuit connected to at least one column, which has a controllable current source (abstract; claim 1, lines 9 and 10; and column 2, lines 50-55).

Further, Figure 4 clearly shows the control circuit 11 having a plurality of outputs each connected individual braches of LEDs (Figure 4, column 4, lines 39-45).

The above discussed teaching of Pross et al. supports independent actuation of or an LED branch or series.

Argument: Neither in combination not individually Alexanderson et al. and Pross et al. discloses or suggests the plurality of LED lighting units connected to different outputs of a control device utilizing pulse modulation corresponding to voltage regulation.

Response: Pross et al. meets the limitation " the LEDs are actuatable - capable of being actuated- by means of a pulse width modulation" with the teaching discussed in the prior art including in column 3, lines 5-7 and 59-60).

Argument: Neither in combination not individually Alexanderson et al. and Pross et al. discloses or suggests: a central control unit having channel outputs respectively dedicated for actuation of different actuating profiles of LED; and current regulation separately provided in each light unit.

Response: Each of the claims 1 and 20 recites the limitation "actuatable by means of pulse width modulation so as to selectively represent flashing, twinkling, color changing or moving lights". The recitation "actuatable" has been broadly interpreted as "capable of" performing a function. The above limitation is not a positive limitation, but only requires the ability to so

perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138.

As discussed in the Final Office action, Alexanderson et al. in view of Pross et al. discloses an aircraft cabin lighting system comprising a plurality of LEDs actuatable – capable of being actuated for the intended function - by pulse width modulation including a control module. Further, Alexanderson et al. in view of Pross et al. discloses an aircraft cabin lighting system comprising red, blue and green LEDs that can produce different colors (Pross, column 1, lines 34-40). The above teaching explicitly indicates the disclosed LED lighting system having capability of producing color change.

Thus, Alexanderson et al. in view of Pross et al. is considered capable of producing the intended lighting patterns.

Further, in considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom.” *In re Preda*, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

Argument: Alexanderson et al. discloses a basic vehicular or aircraft lighting system , which does not provide capability of selectively operating the

LEDs through intermediary control device and regulatory components or modules as claimed by the applicant.

Even combining Alexanderson et al. with Pross et al. fails to provide a structure and circuitry capable of the functions provided in the present invention.

Response: The above discussion respective to “LEDs capable of producing color change” applies to the applicant’s argument expressed above.

Argument: Pross et al. discloses a display light for vehicles such as a taillight, a brake light, a directional light or emergency blinkers, which is not usable for the interior of a vehicle or an aircraft. Thus, Pross et al. is not capable of providing the claimed light system, as there is complete lack of control device for the selective and independent actuation of lighting units as claimed by the applicant.

Response: As discussed in the Final office action, Alexanderson et al. discloses the aircraft lighting system, which lacks operational coupling of a control unit, a pulse modulation means arranged in the manner as claimed by the applicant. Therefore, the aircraft light system of Alexanderson et al. is proposed to be modified with respective teaching of Pross et al.

One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references.

In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., Inc., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Hargobind S Sawhney/

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